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ABSTRACT

The Outdoor Research Project of Hutchinson Senior High School in Hutchinson, Kansas, was funded in 1977 to conduct a scientific baseline study of an outdoor education center and a state park. Gifted students used initial limnology tests, fish population studies, and groundcover analyses to produce management recommendations and a computer simulation program of pond water conditions. The program expanded the next year to an interdisciplinary program which resulted in implementation and further development of management recommendations, production of an educational documentary, tree growing from seed, and trail planning and marking. Students gain insight and experiences in their work with representatives from the business, scientific, and recreation community, and the community benefits when reil problems are solved. (CL)

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Federal Grant "Seed Money"--Sprouted, Growing and Blooming in the Kansas Sandhills

Interdisciplinary Studies--Their "Place in the Sun"

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Paper presented to CEC/TAG National Topical Conference on the Gifted and Talented Child, Orlando, Florida, December 1981.

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There is a blooming, growing interdisciplinary "plant" thriving in central Kansas as a result of being "well-rooted" in administrative funding and flexibility of scheduling, being "watered and nourished" by local and state community resources and interest. It is a perennial plant, since the students involved and their interests change each year, and therefore, the "seeds" of student involvement result in different varieties of blossoms each year. The projects themselves are student-determined and evaluated; they are relevant and have "real" outcomes (Renzulli Type III experiences) for the students and the community; and the learning opportunities span a variety of academic disciplines--science, social science and humanities, language arts and the fine arts.

The Outdoor Research Project of Hutchinson Senior High School, Hutchinson, Kansas, had its beginning in the fall of 1977 when Federal grant monies awarded to the Reno County Special Education Cooperative funded supplies, equipment and consultant fees for a scientific baseline study of the Dillon Outdoor Education Center and the Kansas State Sandhills Park, both located near Hutchinson, Kansas. Gifted students from the six high schools in Reno County participated in the first year of the project, during which time they made initial limnology tests and fish population studies at the outdoor center's fishing ponds and ground cover analysis of the sandhills area. Management recommendations and a computer simulation program of pond water conditions were written at the end of the year's study.

In the spring of 1978 the Board of Education of U.S.D. 308, Hutchinson Public Schools, voted to develop and fund the program as an on-going part of their comprehensive program for identified gifted students in Hutchinson Senior High School. Since then the project has expanded from a basic scientific research program to an interdisciplinary program, incorporating the needs of and projects designed by the students participating. The students are allowed five days of released time per semester for on-site research, investigation or writing involved in current projects and they are given a semester's transcript credit for the work.

During the 1978-79 school year, follow-up pond studies included new fish population counts, chemical analysis of pond water a d contributing springs and streams, invertebrate studies and topographical maps of pond bottoms, collection and drying of herbarium specimens from both the outdoor center and the park, base-line studies of animal population in the sandhills, and a transect--study of ground cover and soil samples in the Sandhills Park. Again management recommendations were written and submitted to the Hutchinson Recreation Commission (manager of Dillon Outdoor Education Center) and the Kansas State Park Authority. Students also attended water resources seminars conducted by the state resources research offices and followed the resulting legislation through the committee hearings and the "on-the-floor" legislative debates.

The school year of 1979-80 found the students carrying out some of the previous year's recommendations for fish population control, making additional contour readings of pond bottoms, identifying the grass and sedge samples and assembling two herbaria--one for the Outdoor Education Center

and one for Hutchinson High School. A 15-minute documentary of the Sandhills Park was planned, researched, filmed and produced by the students. This film, which incorporated the history and philosophy of the park, has been used for educational and promotional purposes relating to the park by school personnel and civic groups.

The three-pronged project for the 1980-81 school year resulted from the participants' awareness of two community needs. One area--growing trees from seed under the auspices of a state extension consultant--combined scientific research with an aesthetic community improvement program, since the goal of the project is the replacement of dead and dying Chinese Elm trees with a variety of flowering and shade trees.

In cooperation with the tourism and recreation committees of the Hutchinson Chamber of Commerce, the students are planning and marking trails in the Sandhills Park for family, handicapped and tourist use. Incorporated in this project are the design and production of informational brochures including the history and philosophy of the park that the students will use when they act as trail guides. The logo to be used on these brochures and the illustrations of the trees to be used in the informational pamphlets accompanying them as they are distributed throughout the community have been the project of the art students that enrolled in the program. Working with engineer mentors, four of the participants are assessing the alternative uses of the pond area of the park and making recommendations for its use on the basis of this study.

During this time the role of the facilitator also changed from one of direct consultant in the area of scientific research to one of implementing

and enhancing the awareness, organization, analysis and evaluative skills of the students. There is also an ongoing need for the search for outside resources, resource persons, funding and the reservoir of project possibilities.

So, where do you begin to plan your "interdisciplinary garden?" First, pick your garden plot carefully. The "soil" should be "fertile"--that is, it should present real problem(s) to be solved. They are there! Start spading the ground and turn them up! The soil should also support a variety of plants--we need the border plants, the brilliant flowers, the ornamental trees, and the kitchen herbs--so that the "seeds" (students) are not "forced-grown" but find their own areas of growth--whether that be in the academics or aesthetics or both.

Next, design your garden carefully so that different areas compliment each other. Different varieties of plants need different nutrients and care. Some of the most important contributions to the Outdoor Research Program came as a result of independent studies of students who did not wish to work with the group but had specific interests and projects that added depth and knowledge to the program objectives. If you are truly going to make the program interdisciplinary the parts must be interrelated but readily identified and individually nurtured. Do not forget the sunlight of recognition of the results--especially the ultraviolet rays of a "real audience."

Sound like a lot of work? So is gardening--but the beautiful blooming students are worth the effort!